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**FIVE-YEAR REVIEW
Charlevoix Municipal Well Superfund Site
Charlevoix, Michigan**

I. Purpose of the Five-Year Review

The United States Environmental Protection Agency (U.S. EPA) has conducted this second Five-Year Review of the Remedial Action (RA) which was implemented at the Charlevoix Municipal Well Superfund Site, Charlevoix, Michigan. This review was intended to evaluate whether the RA remains protective of public health and the environment and confirm conclusions of the Five-Year Review conducted in 1994.

Section 121(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Section 300.430(f) (4) (ii) of the National Oil and Hazardous Substance Contingency Plan (NCP), require that periodic (no less often than five years) reviews are to be conducted for sites where hazardous substances, pollutants, or contaminants remain at the site above levels that will not allow for unlimited used or unrestricted exposure following the completion of all remedial actions for the site.

OSWER Directive 9355.7-02 (Structure and Components of Five-year Reviews, May 23, 1991) provides that U.S. EPA will conduct five-year reviews as a matter of policy (Policy Review) at (1) sites where no hazardous substances will remain above levels that allow unlimited used and unrestricted exposure after completion of the RA, but the cleanup levels specified in the ROD will require five or more years to attain; and (2) sites addressed pre SARA at which the remedy, upon attainment of cleanup levels, will not allow unlimited use and unrestricted exposure. The five-year review of the Charlevoix Municipal Well Site RA is a Policy Review and was conducted in accordance with part (2) of this directive.

U.S. EPA has established a three-tier approach to conducting five-year reviews, the most basic of which provides a minimum protectiveness evaluation (Level I Review). U.S. EPA determines the level of the review based on site-specific considerations, including the nature of the response action, the status of on-site response activities, and the proximity to populated areas and sensitive environmental areas. A Level I review was conducted at the Charlevoix Municipal Well Site and consisted of a site visit and a review of all documents and data associated with the RA.

II. Level I Review

A) Historic Monitoring Reports

Groundwater samples have been collected annually from monitoring wells starting in 1988 and based on the Reconciliation and Termination Agreement dated January 27, 1997 all remedial

activities were completed. No further activities have been conducted at this site. Analysis of past sampling activities have shown a gradual decrease in contamination. Sampling has verified that the two plumes were discharged to Lake Michigan and diluted.

B) Site Visits

According to the August 1994 site visit by U.S. EPA and the State of Michigan, the Reconciliation and Termination Agreement, and recent telephone conversation with the Superintendent of the water system for the City of Charlevoix, the water treatment plant is operating as intended, and the institutional controls, restricting access to groundwater in the City of Charlevoix, are still in place.

C) Recommendations Based on Level I Review

The City of Charlevoix now has a safe, clean, and reliable drinking water supply (with all citizens being served by the municipal water system). Based on the review of the monitoring data, consultation with the MDNR, and site visit, U.S. EPA has determined that all recommendations given in the Record of Decision (ROD) of June 1984 Initial Remedial Measure ROD have been met. The recommendations were as follows:

- 1) Allow the contaminant plumes to discharge under natural flow conditions to Lake Michigan.
- 2) Continue long-term monitoring of the plumes during the natural purging period.
- 3) Institutional restrictions on the installation of private wells in the contaminated aquifer will be enforced by local health officials.

D) Statement of Protectiveness

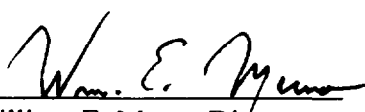
The remedies selected for this site remain protective of human health and the environment. All completion requirements for the site have been met as specified in OSWER Directive 9320.2-3A. Specifically, confirmatory sampling has verified that the ROD cleanup objectives have been achieved and all cleanup actions specified in the ROD have been implemented.

Given the continued implementation of these recommendations and the current understanding of the Charlevoix Municipal Well site the site remains protective of human health and the environment. Based upon the December 2, 1993 delisting of the Charlevoix site from the National Priorities List (NPL) and the January 27, 1997 Reconciliation and Termination Agreement where our agencies acknowledged that remedial activities were complete for the site and the State Services Contract was terminated, the State of Michigan and U.S. EPA has determined that no further Superfund Five-Year reviews are necessary in order to provide protection of human health and the environment.

E) Next Five-Year Review

Consequently, no more five-year reviews are required in accordance with Section 121 of CERCLA.

Approved By:



William E. Muno, Director
Superfund Division

5/15/01
Date

Disapproved By:

William E. Muno, Director
Superfund Division

Date